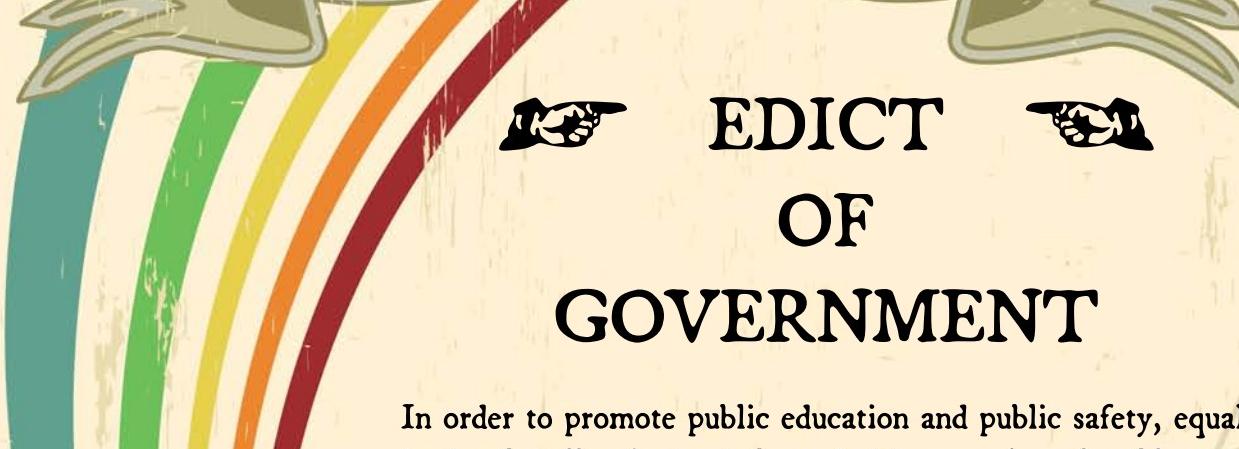




EAST AFRICAN COMMUNITY



EDICT  
OF  
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EAS 764 (2011) (English): Rough (Paddy) rice - Specification



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**EAS 764:2011**  
**ICS 67.060**

## **EAST AFRICAN STANDARD**

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### **Rough (Paddy) rice — Specification**

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## **EAST AFRICAN COMMUNITY**

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**HS 1006.10.00**

## Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that "Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose".

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

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East African Community

P O Box 1096

**Arusha**

Tanzania

Tel: 255 27 2504253/8

Fax: 255-27-2504481/2504255

E-Mail: [eac@eachq.org](mailto:eac@eachq.org)

Web: [www.each.int](http://www.each.int)

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## **Introduction**

This standard has been developed to take into account:

- the needs of the market for the product;
- the need to facilitate fair domestic, regional and international trade and prevent technical barriers to trade by establishing a common trading language for buyers and sellers.
- the structure of the CODEX, UNECE, USA, ISO and other internationally significant standards;
- the needs of the producers in gaining knowledge of market standards, conformity assessment, commercial cultivars and crop production process;
- the need to transport the product in a manner that ensures keeping of quality until it reaches the consumer;
- the need for the plant protection authority to certify, through a simplified form, that the product is fit for cross-border and international trade without carrying plant disease vectors;
- the need to promote good agricultural practices that will enhance wider market access, involvement of small-scale traders and hence making farming a viable means of wealth creation; and
- the need to ensure a reliable production base of consistent and safe crops that meet customer requirements.

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## Rough (Paddy) rice — Specification

### 1 Scope

This East African Standard specifies the requirements and methods of sampling and test for rough rice of the varieties grown from *Oryza spp* used for further processing..

### 2 Normative references

The following normative documents contain provisions which, through reference in this text constitute provisions of this East African

ISO 605, *Pulses — Determination of impurities, size, foreign odours, insects, and species and variety — Test methods*

ISO 711, *Cereals and cereal products — Determination of moisture content (Basic reference method)*

ISO 712, *Cereals and cereal products — Determination of moisture content — Routine reference method*

ISO 5223, *Test sieves for cereals*

ISO 6639-1, *Cereals and pulses — Determination of hidden insect infestation — Part 1: General principles*

ISO 6639-2, *Cereals and pulses — Determination of hidden insect infestation — Part 2: Sampling*

ISO 6639-3, *Cereals and pulses — Determination of hidden insect infestation — Part 3: Reference method*

ISO 6639-4, *Cereals and pulses — Determination of hidden insect infestation — Part 4: Rapid methods*

ISO 13690, *Cereals, pulses and milled products — Sampling of static batches*

ISO 16050, *Foodstuffs — Determination of aflatoxin B<sub>1</sub>, and the total content of aflatoxin B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub> and G<sub>2</sub> in cereals, nuts and derived products — High performance liquid chromatographic method*

EAS 38, *Labelling of prepackaged foods — Specification*

EAS 79, *Cereals and pulses as grain — Methods of sampling*

EAS 217, *Methods for the microbiological examination of foods*

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

CODEX Stan 193, *Codex general Standards for contaminants and toxins in Food and Feed*

## 3 Terms and Definitions

For the purpose of this East African Standard, the following definitions shall apply.

### 3.1

#### **rough rice**

whole or broken kernels of paddy rice (*Oryza glaberrima*, *Digitaria exilis*, *Oryza sativa*, *Oryza longistaminata*)

### 3.2

#### **cereals**

in the context of this standard, cereals refer to wheat, barley, oats, cereal rye, triticale, sorghum, maize and rice

### 3.3

#### **foreign matter/extraneous matter**

all organic and inorganic material other than pearl millet, broken kernels, other grains and filth.

### 3.4

#### **insect/pest damaged**

grains eaten in part by stored grain insects and any field pests of grains including *Heliothis spp.* Grains may have a hole (commonly referred to as bored) or have a chewed appearance on any part of the grain.

### 3.5

#### **milling yield**

an estimate of the quantity of whole kernels and total milled rice (whole and broken kernels combined) that are produced in the milling of rough rice to a well-milled degree.

### 3.6

#### **over-dried damaged**

refers to defective grains caused by overheating during artificial drying. It can be detected where grain is hot, exhibits an unusual odour, exhibits significant sprouting (greater than 10%) or other evidence of weather damage

### 3.7

#### **paddy kernels**

whole or broken unhulled kernels of rice; whole or broken kernels of brown rice, and whole or broken kernels of milled rice having a portion or portions of the hull remaining which cover 12.5 % or more of the whole or broken kernel

### 3.8

#### **parboiled rough rice**

rough rice in which the starch has been gelatinized by soaking, steaming, and drying. Grades 1 to 4 inclusive, shall contain not more than 10.0 percent of ungelatinized kernels. Grades 1 and 2 shall contain not more than 0.1 percent, Grades 3 and 4 not more than 0.2 percent of nonparboiled rice. If the rice is:

- (1) Not distinctly coloured by the parboiling process, it shall be considered "Parboiled Light";
- (2) distinctly but not materially coloured by the parboiling process, it shall be considered "Parboiled";
- (3) materially coloured by the parboiling process, it shall be considered "Parboiled Dark." The colour levels for "Parboiled Light," "Parboiled," and "Parboiled Dark" rice shall be in accordance with the interpretive line samples for parboiled rice.

### 3.9

#### **poisonous, toxic and/or harmful seeds**

any seed which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as Jimson weed — dhatura (*D. fastuosa* Linn and *D. stramonium* Linn.) corn cokle (*Agrostemma githago* L., *Machai*

*Lallium remulenum* Linn.) Akra (Vicia species), *Argemone mexicana*, Khesari and other seeds that are commonly recognized as harmful to health

### 3.10

#### **smutty rough rice**

rough rice which contains more than 3.0 percent of smutty kernels

### 3.11

#### **Variety**

There are four classes of rough rice. The following four classes shall be based on the percentage of whole kernels, and types of rice:

- Long Grain Rough Rice.
- Medium Grain Rough Rice.
- Short Grain Rough Rice.
- Mixed Rough Rice.

- (1) **Long grain rough rice** shall consist of rough rice which contains more than 25.0 percent of whole kernels of rough rice and in Grades 1 through 4 not more than 10.0 percent of whole or broken kernels of medium or short grain rice.
- (2) **Medium grain rough rice** shall consist of rough rice which contains more than 25.0 percent of whole kernels of rough rice and in Grades 1 through 4 not more than 10.0 percent of whole or broken kernels of long grain rice or whole kernels of short grain rice.
- (3) **Short grain rough rice** shall consist of rough rice which contains more than 25.0 percent of whole kernels of rough rice and in Grades 1 through 4 not more than 10.0 percent of whole or broken kernels of long grain rice or whole kernels of medium grain rice.
- (4) **Mixed rough rice** shall consist of rough rice which contains more than 25.0 percent of whole kernels of rough rice and more than 10.0 percent of "other types" as defined in 3.1.

## 4 Quality requirements

### 4.1 General requirements

**4.1.1** Rough rice shall meet the following general requirements/limits as determined using the relevant standards listed in Clause 2. Rough rice

- a) shall be the dried mature grains of edible *Oryza spp*;
- b) be , clean, wholesome, uniform in size, colour and shape;
- c) shall be safe and suitable for human consumption;
- d) shall be free from abnormal flavours, musty, sour or other undesireable odour, obnoxious smell and discolouration;
- e) shall be free from micro-organisms and substances originating from micro-organisms, fungi or other poisonous or deleterious substances in amounts that may constitute a hazard to human health.

**4.1.2** Rough rice shall be in form of well-filled seeds of uniform colour representative of the declared variety.

### 4.2 Specific requirements

#### 4.2.1 Grading

Rough rice for human consumption shall be graded into three grades on the basis of the tolerable limits established in Table 1 which shall be additional to the general requirements set out in this standard.

## 4.2.2 Ungraded rough rice

Shall be rough rice which do not fall within the requirements of Grades 1, 2, and 3 of this standard but are not rejected rough rice.

*Note: For Tanzania and Burundi this requirement shall not apply.*

## 4.2.3 Reject grade rough rice

This comprises rough rice which has objectionable odour, off flavour, living insects or which do not possess the quality characteristics specified in Table 1. It cannot satisfy the conditions of ungraded rough rice and shall be graded as reject rough rice and shall be regarded as unfit for human consumption.

**Table 1 — Specific requirements**

Characteristics		Maximum limits			Method of test	
		Grade 1	Grade 2	Grade 3		
Foreign matter, % m/m	Organic	1.0	1.5	2.0	ISO 605	
	Inorganic	0.25	0.25	0.5		
Pest damaged grains, % m/m		0.5	0.75	1.0		
Discoloured grains, % m/m		0.1	0.5	1.0		
Moisture, % m/m		13	13	13	EAS 82	
Immature/Shriveled grains, % m/m		1	3	5	ISO 605	
Total Aflatoxin (AFB1+AFB2+AFG1 +AFG2), ppb		10			ISO 16050	
Aflatoxin B1 only, ppb		5				
Fumonisin ppm		2				

*Note: Broken % in Brown and milled rice to be used to evaluate the paddy grades*

## 5 Contaminants

### 5.1 Heavy metals

Rough rice shall comply with those maximum limits for heavy metals established by the Codex Alimentarius Commission for this commodity.

### 5.2 Pesticide residues

Rough rice shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity

*Note: where the use of certain pesticides is prohibited by some Partner States, then it shall be notified to all Partner States accordingly.*

### 5.3 Mycotoxin limits

Rough rice shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity. In particular, total aflatoxin levels in rough rice for human consumption shall not exceed 10 µg/kg (ppb) with B<sub>1</sub> not exceeding 5 µg/kg (ppb) when tested according to ISO 16050.

## 6 Hygiene

**6.1** Rough rice shall be produced, prepared and handled in accordance with the provisions of appropriate sections of EAS 39

**6.2** When tested by appropriate standards of sampling and examination listed in Clause 2, the products:

- shall be free from microorganisms in amounts which may represent a hazard to health and shall not exceed the limits stipulated in Table 2;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

**Table 2 — Microbiological limits**

	Type of micro-organism	Limits	Test method
i)	Yeasts and moulds, max. per g	$10^4$	EAS 217
ii)	<i>S. aureus</i> per 25 g	Not detectable	
iii)	<i>E. Coli</i> , max. per g	Not detectable	
iv)	<i>Salmonella</i> , max. per 25 g	Not detectable	

## 7 Packaging

**7.1** Rough rice shall be packed in suitable packages which shall be clean, sound, free from insect, fungal infestation and the packing material shall be of food grade quality.

**7.2** Rough rice shall be packed in containers which will safeguard the hygienic, nutritional, technological and organoleptic qualities of the products.

**7.3** The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They shall not impart any toxic substance or undesirable odour or flavour to the product.

**7.4** Each package shall contain rice of the same type and of the same grade designation.

**7.5** If rough rice is presented in bags, the bags shall also be free of pests and contaminants.

**7.6** Each package shall be securely closed and sealed.

## 8 Labelling

**8.1** In addition to the requirements in EAS 38, each package shall be legibly and indelibly marked with the following:

- i) product name as "Rough/Paddy Rice";
- ii) variety:
  - Long grain rough rice
  - Medium grain rough rice
  - Short grain rough rice
  - Mixed rough rice

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- iii) grade;
- iv) name, address and physical location of the producer/ packer/importer;
- v) lot/batch/code number;
- vi) net weight, in kg;

*Note: EAC partner states are signatory to the International Labour Organizations (ILO) for maximum package weight of 50kg where human loading and offloading is involved*

- vii) the declaration “Food for Human Consumption”
- viii) storage instruction as “Store in a cool dry place away from any contaminants”;
- ix) crop year;
- x) packing date;
- xi) instructions on disposal of used package;
- xii) country of origin;
- xiii) a declaration on whether the rough rice was genetically modified or not.

## 9 Sampling methods

Sampling shall be done in accordance with the EAS 79/ISO 13690.

